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The West American Scientist

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CACTUS NOTES.

MAMILLIARIA THORNBERI Orcutt.

Cylindrical, 1¼ inch in diameter, usually 2-3 inches high, erect, with 8 or 9 spiral rows of tubercles, axils naked; 13-18 slender white or brown tipped radials ¼ inch long; usually 1 slender flexuous hooked central one-fourth to three-fourths of an inch long, tipped with brown; fruit clavate, scarlet, containing minute black seeds. Tips of tubercles olive green, base and axils and sunken portion of plant tinged with purple; radials usually 13, the upper sometimes the longest, often brown nearly to the base; central occasionally brown, usually the lower half white or yellowish, often hooked upward, but often twisted and turning in every direction. Plant proliferous at base, forming numerous offsets in the axils of the buried or lower tubercles; these quickly take root and usually soon sever connection with the parent, thus forming dense compact masses of old and young plants, usually 10-50—but in one, perhaps not exceptional case, I counted 110 distinct plants, in a cluster—all apparently originating from the tallest individual in the group. Occasionally a plant, from injuries sustained, becomes bifurcate or forms a number of aerial heads which remain permanently attached—but which usually form roots of their own and eventually survive the death of the parent. More than 1 central spine appears very rare, but 2 or three sometimes appear from the same small woolly areola, one or all hooked, of equal or varying length. The largest plant among over 1,000 was 1½ inch in diameter and nearly a foot high! Type, Orcutt, No. 2583:—Arizona. Curiously the same plant was found a few days earlier than by the author by Prof. J. J. Thornber, and planted in the cactus garden of the University of Arizona, and this interesting addition to the cactus flora of the United States may therefore appropriately bear his name.

ECHINOCACTUS FALCONERI Orcutt.

Plant cylindrical in age, 9-12 inches in diameter, usually under 2 feet high, light apple green in color, with a withered appearance (perhaps not normal); ribs tuberculate, acute, spirally inclined (hence called caracola, "snail", or biznaga caracola), usually 13, to rarely 17, intervals narrow and deep; radial spines 10 or less, grayish white, flattened, flexuous, 1-2½ inches long and laterally disposed; central spines 7, stout, strongly annulated, reddish brown, the 3 upper and 3 lower of about equal length, divergent, 1-3 inches long, terete or slightly angled, straight; the longest central erect, straight, flattened or channelled above, ¼ inch broad or less, varying from 1 to 6 inches in length sometimes on the same plant, uniformly about ½ inch at the tip turned

downword at right angles with the main portion of the spine, forming a short hook. Named in honor of William Falconer. Type, Orcutt, No. 2603:—Batamotal, Sonora, Mexico.

Flower and fruit will be described later, but resemble those of E. Wislizeni, with which the plant has perhaps hitherto been confounded.

MAMMILLIARIA OLIVIAE Orcutt.

Globose to ovate, 2½ inches in diameter, 3 inches high, simple or rarely branched or cespitose; tubercles ovate, ¼ inch long, axils naked; radials 25-36, snowy white, slender, rigid, ¼ inch long, upper ones shorter; centrals 1-3, the lower one only an eighth of an inch long, erect, rigid, white or tipped with chocolate brown; the two upper centrals slender, white or rarely tipped with brown, 3 times as long, closely resembling the radials; lower central rarely longer, but occasionally even ½ inch long, slender or flexuous, brownish and hooked upward—more frequently seen on the lower outer tubercles of young plants; fruit scarlet, clavate, with small seeds. Type, Orcutt, No. 2602:—Of snowy whiteness from its numerous interlacing spines; dedicated to the author's life partner, who has accompanied him in thought on the mountains and deserts of Arizona, where this beautiful plant occurs.

CEREUS STRIATUS Brandegee.

Cereus digueti Weber, Mu d'hist nat,b, 1895, 319.

Apparently not rare in saline soil near Batamotal, Sonora, where it is known by the name sa-ra-ma-tra-ca; the tubers are produced abundantly like small potatoes.

ECHINOCACTUS EMORYI Engelm.

Cylindrical, rarely exceeding 2 feet in diameter and 6 feet in height; ribs sharp, usually tuberculate and 21 in number; radials 5 or more, usually 8, stout, annulated, terete, reddish, yellowish, white or ashy, commonly straight or curved inward, 1-2 inches long; the 1 central straight or more or less curved downward, 2-3 inches long, otherwise like the radials.

Gila Bend, Arizona, southward to near Guaymas, Sonora (Orcutt 2578, 2605).

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